



CUSTOMER PURCHASING BEHAVIOR & EXPERIMENT DESIGN

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CUSTOMER PURCHASING BEHAVIOR

Table with Visit id

ts	visitorid	event	itemid	transactionid	days_first_visit	timestamp_clean	new_visit	visit_id	visit_number
1.43681E+12	36	view	176286	0	0	2015-07-13 16:32:48.853+00	0	36_0	0
1.43898E+12	37	view	168952	0	0	2015-08-07 20:40:41.693+00	0	37_0	0
1.439E+12	37	view	168952	0	0	2015-08-08 03:04:33.785+00	1	37_1	1
1.439E+12	37	view	168952	0	0	2015-08-08 03:07:37.154+00	0	37_1	1
1.43906E+12	37	view	168952	0	1	2015-08-08 19:38:33.781+00	1	37_2	2
1.4393E+12	37	view	168952	0	4	2015-08-11 14:10:14.447+00	1	37_3	3
1.4393E+12	37	view	168952	0	4	2015-08-11 14:38:56.763+00	0	37_3	3
1.4393E+12	37	view	434344	0	4	2015-08-11 14:42:07.103+00	0	37_3	3
1.43948E+12	37	view	168952	0	6	2015-08-13 15:54:35.366+00	1	37_4	4
1.44184E+12	38	view	182101	0	0	2015-09-09 22:53:47.114+00	0	38_0	0

Dictionary:

Column	Description
days_first_visit	Days lapsed since First visit by the visitor to current visit
new_visit	Indicator for more than 30 mins of inactivity to account as a new visit
visit_number	Counter increments by 1 for a new visit, start at zero
visit_id	visitorid appended with visit number

- **Hypothesis:** Visitors with no purchase in the first 90 days are unlikely to make any purchase at all

Observations:

- Visitors with no Orders in the first 90 days from the first visit; Conversion rate: 0.04%
- Compared to overall site; Conversion rate: 1%

Segment	Conversion rate (%)
All Visitors (overall site)	1%
Visitors: No orders in first 90 days of the first visit	0.04%

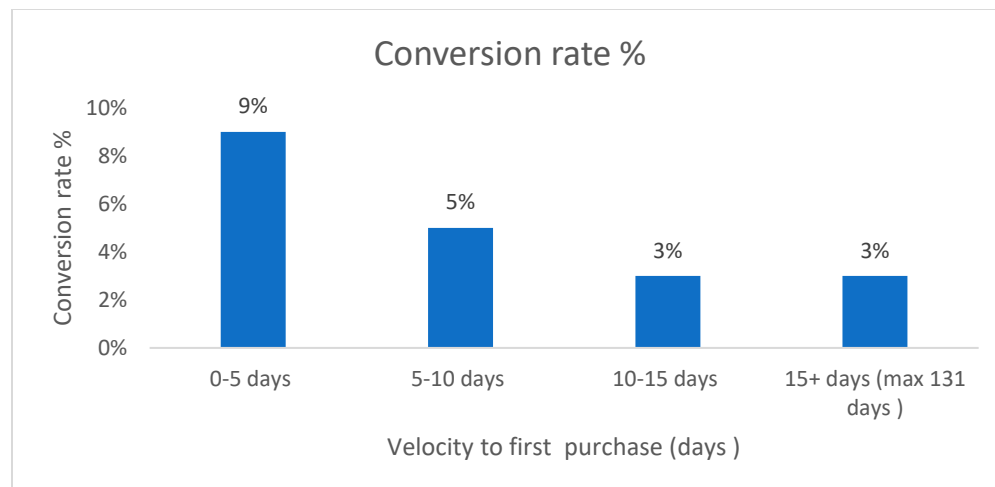
- **Hypothesis:** Velocity to first purchase, and velocity between purchases, are potential indicators of long-term customer value

Velocity to first Purchase Vs. Conversion rate:

Definitions:

- Velocity to first Purchase: Time-lapse (days) from the first Visit to first Purchase
- Conversion rate: Purchases per Visits
- Purchases: First & subsequent Purchases
- Visits: First & subsequent visits

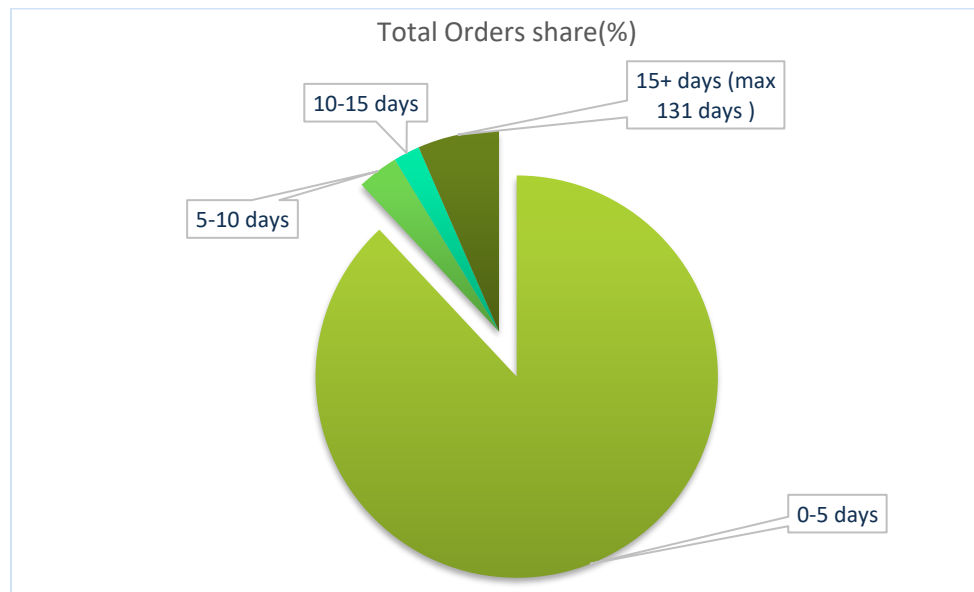
Observations:



Summary:

- ✓ Visitors with Velocity to first purchase '0 to 5 days' (bin); Conversion rate: 9%
- ✓ As the Velocity to first purchase increases the conversion drops & trails to 3%

➤ Velocity to first Purchase Vs. Total Orders Share (%)



Summary:

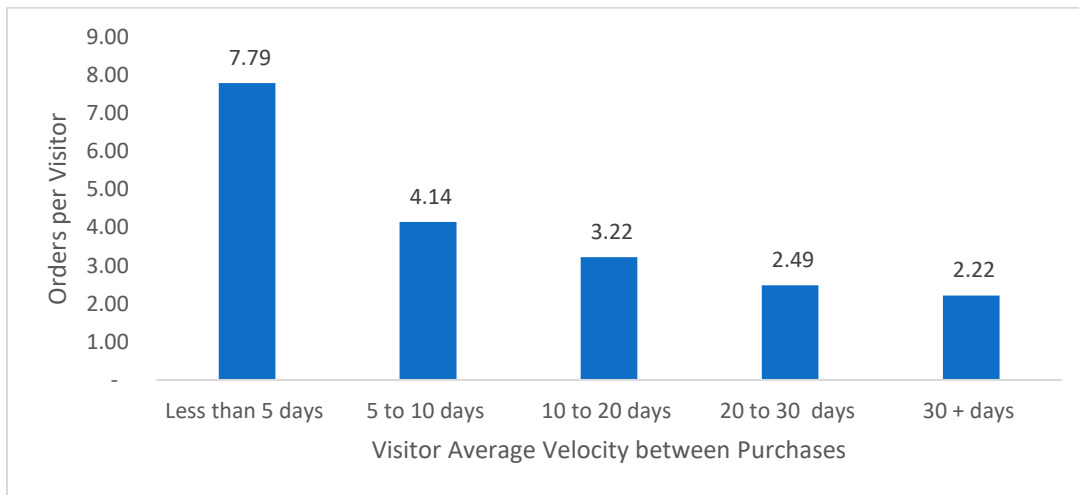
- ✓ 88% of all the purchases were done by customers with First purchase velocity less 5 days.

* Hence Velocity to first purchase is a strong indicator of propensity to purchases in subsequent visits.

➤ Visitor Average Velocity between purchases Vs Customer value

Definition –

- Total Days engaged: Visitor first Visit to last Visit (days lapsed)
- Visitor Average Velocity between Purchases: Average of purchase velocity (days) per Visitor



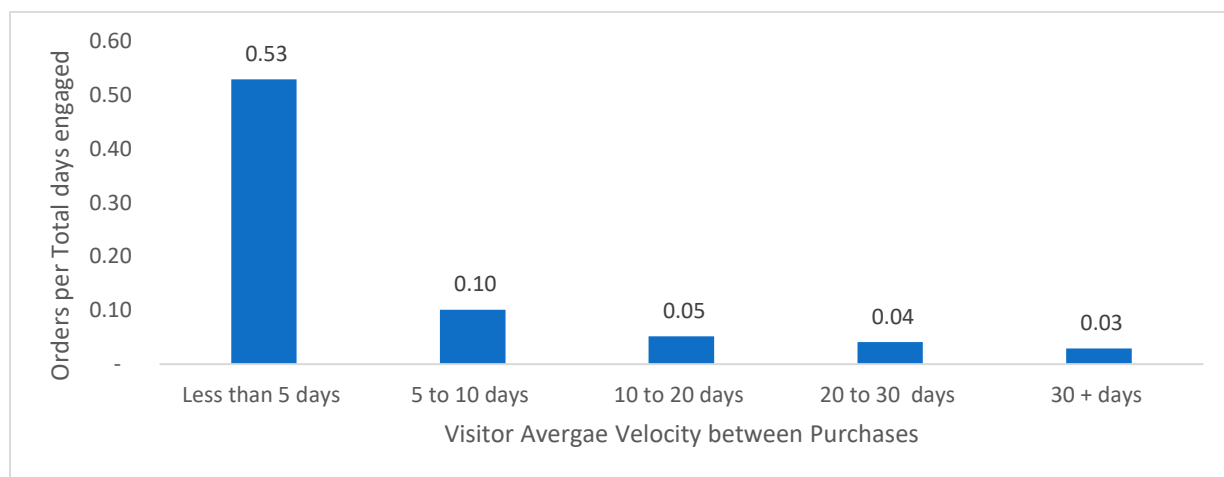
Summary:

- ✓ 7.79 Orders per Visitor for 'Visitors average Velocity between purchases' Less than 5 days
- ✓ As the 'Visitors average Velocity between purchases' increases Orders per Visitors drops

Definition –

Total Days engaged: Visitor first Visit to last Visit (days lapsed)

Orders per Total days engaged				
Less than 5 days	5 to 10 days	10 to 20 days	20 to 30 days	30 + days
0.53	0.10	0.05	0.04	0.03



Summary

- ✓ 'Orders per Total days engaged' is 0.53 for 'Visitor Average velocity between purchases' less than 5 days
- ✓ As the 'Visitor Average velocity between purchases' increases the 'Orders per Total days engaged' drops

*Average velocity between orders is a strong indicator for 'Average Orders per Visitor' & 'Orders per Total day engaged' Hence Customer Value

Note: Experiment design continued in the 2th report

